

Notice of Proposed Action Opportunity to Provide Scoping Comments

Moonlight Range Allotment Project

Mt. Hough and Beckwourth Ranger District

Plumas National Forest

Plumas County, California



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Where is this project in the NEPA process?

NEPA (short for the National Environmental Policy Act of 1969) guides the Forest Service decision-making process and provides opportunities for interested parties to give their ideas about resource management. Input during the scoping period (step 3 in the checklist below) is important in helping the Forest Service identify resource needs which will shape the alternatives that are evaluated and lead to the formation of a decision.

The Moonlight Range Allotment Project falls under the provisions of the Plumas National Forest Land and Resource Management Plan (USDA 1988) as amended by the Sierra Nevada Forest Plan Amendment FSEIS and ROD (USDA 2004a, 2004b). Public notice, comment, and administrative review for this project are governed by 36 CFR 218 Subparts A and B regulations that provide for a pre-decisional objection process for projects documented in a Record of Decision or Decision Notice. The checklist below shows the steps of the NEPA process for this proposed project. The checked line indicates where the attached proposed action is in that process. Checklist items with bold outline are public involvement opportunities offered during the planning process.

____ *Step One - Need for a Project*

____ *Step Two - Develop Project Proposal*



Step Three - Scoping (Public Input)

____ *Step Four - Develop Issues and Alternatives*

____ ***Step Five – Environmental Effects Analysis***

____ *Step Six – Draft EA for Comment
(public input, 30 days)*

____ *Step Seven – Response to Comments*

____ *Step Eight - Final EA and Draft Decision Notice
(objection filing period, 45 days)*

____ *Step Nine - Objection Resolution (45 days)*

____ *Step Ten – Decision Notice*

Introduction

We are proposing to authorize livestock grazing with changes to management strategies on the Antelope, Antelope Lake, Lights Creek and Lone Rock Allotments (the Allotments). In addition, the Proposed Action would include, in general terms, the following actions: fencing off certain sensitive areas; implement specific resource management measures to improve proper functioning condition within identified meadows, stream reaches and fens; and, monitoring and adapting, as needed, in accordance with an adaptive management strategy. These actions are proposed to be implemented on the Mt Hough and Beckwourth Ranger Districts of the Plumas National Forest.

Background

It is Forest Service policy to make forage available to qualified livestock operators from lands suitable for grazing consistent with national forest land and resource management plans (Forest Service Manual (FSM) 2203.1 and 36 CFR 222.2 (c)). The Allotments were determined by the Plumas National Forest Land and Resource Management Plan (PNF LRMP, USDA 1988) to be suitable for commercial livestock grazing (USDA 1988, pages 4-281- 291). The 2004 Sierra Nevada Forest Plan Amendment (SNFPA) Supplemental Environmental Impact Statement (SEIS) and Record of Decision (ROD) (USDA 2004 a, b) amended the PNF LRMP and did not affect this determination. The Allotments are within the Lights Creek and Antelope Management Areas (USDA 1988, pages 4-281 and 4-285). The Grazing Strategies for these areas are: B) – Environmental Management with Livestock. Under this strategy “livestock use is kept within the apparent present capacity of the range environment. Investments for range management are applied only to the extent required to achieve basic stewardship in the presence of grazing. Investments for implementation may be low. Resource damage resulting from past use is charged to benefiting or stewardship resource areas. The goal for the strategy is to attain livestock control; no attempt is made to achieve livestock distribution (PNF LRMP, USDA 1988, page F-2).” C) – Extensive Management of Environment and Livestock. Under this strategy “management systems and techniques, including fencing and water developments, are applied as needed to obtain relatively uniform livestock distribution and plant use, and to maintain plant vigor. Livestock forage production is maximized. No attempt is made to maximize livestock forage production by improvement practices such as seeding (PNF LRMP, USDA 1988, page F-2).” D) –Intensive Management of Environment and Livestock. Under this strategy, “All available technology for range and livestock management is considered. Livestock forage production is maximized, consistent with maintaining environmental quality and providing for multiple uses. Existing vegetation may be replaced through improvement in growing conditions. Structures may be installed to accommodate complex livestock management systems and practices. Advanced livestock management practices are commonplace” (PNF LRMP, USDA 1988, page F-2).

Project Location

The project area is south of Janesville, California about 3 miles and north of Quincy, California about 8 miles on the Mt Hough and Beckwourth Ranger Districts of the Plumas National Forest in Plumas and Lassen Counties, California (Figure 1). The Antelope Allotment is 24,574 acres consisting of three pastures and ranges in elevation from 5,320 feet on Boulder Creek near Hallet Meadow to 7,795 feet on Thompson Peak. The Antelope Lake Allotment is 4,403 acres and ranges in elevation from 4,880 feet on Indian Creek (below the Dam) to 6,560 feet on Ridge near Boulder Creek. The Lights Creek Allotment is 29,929 acres ranges in elevation from 3,760 feet on Cooks Creek to 7,500 feet on Indicator Peak. The Lone Rock Allotment is 24,628 acres and ranges in elevation from 4,368 feet on Lights Creek to 7,596 feet on Red Rock.

The Moonlight Fire (2007) burned 65,000 acres, affecting at least portions of all the proposed allotments. Nearly 60 percent of the fire resulted in high vegetation burn severity fueled by Sierra mixed conifer and true fir forest, hardwood stands, shrub lands, meadows, and riparian areas. It also impacted roads, trails, rangeland infrastructure, and recreation sites. Due to the impacts listed above the Forest took the opportunity to assess the allotments for potential areas of concern. The following proposed action was developed to address these areas of concern as well as concerns related to general allotment management.

Within the four allotments, there are approximately 96 miles of perennial creek (53 miles on NF lands) and 195 miles of intermittent creek (161 miles on NF). The suitable range extends from the wet meadow areas along Boulder, Cooks, Indian and Lights Creek into the timber types found on nearly all the slopes. Current permitted use on the Antelope Allotment is 200 cow/calf pair “on” and 20 “off” from June 15 to September 15; permitted use on Antelope Lake allotment is 150 cow/calf pair from September 3 to October 4; permitted use on Lights Creek allotment is 24 cow/calf pair “on” and 16 “off” from June 1 to September 1; and permitted use on Lone Rock allotment is 116 cow/calf pair “on” and 180 “off” from June 16 to September 15.

The Antelope Allotment is located in all or portions of T27N, R12E, Sections 1-3, 10-13, T27N, R13E, Sections 2-11, 16-20, T28N, R11E, Sections 1, 11-14, 24, T28N, R12E, Sections 6, 8, 9, 13-29, 34-36, T28N, R13E, Sections 19 and 28-34. The Antelope Lake Allotment is located in all or portions of T27N, R12E, Sections 10-15, 22-27, T27N, R13E Sections 18, 19 and 30. The Lights Creek Allotment is located in all or portions of T27N, R10E, Sections 1-5, 8-29, 33-35, T27N R11E, Sections 5-8, 17-19 and 30. The Lone Rock Allotment is located in all or portions of T27N, R11E, Sections 1-4, 10-15, 24, T27N, R12E, Sections 3-10, 16-22, T28N, R11E, Sections 10, 11, 14-16, 21-28, 33-36, T28N, R12E, Sections 19, 20 and 28-34.

Need for the Proposal

As part of the planning process for the Moonlight Range Allotment Project, an interdisciplinary team worked with the decision maker to compare existing conditions on the Allotments with desired conditions (as described in the Plumas National Forest LRMP, as amended) to identify

potential needed changes in grazing management on the Allotments. This section describes *why* the Forest Service is proposing to act now, what actions are needed, and what mitigations might be required.

1. Action is needed to provide for continued livestock grazing under an updated allotment management plan for the Allotments.

As described above in the Background section, the Plumas National Forest Land and Resource Management Plan (PNF LRMP, USDA 1988) identifies livestock grazing as an appropriate use of the areas encompassed within the Allotments. It is Forest Service policy to make forage available to qualified livestock operators from lands suitable for grazing consistent with national forest land and resource management plans (Forest Service Manual (FSM) 2203.1 and 36 CFR 222.2 (c)). Continued domestic livestock grazing on the Allotments would be consistent with Forest Plan goals, objectives, and standards and guidelines. (PNF LRMP pages 4-35, 4-36; and Sierra Nevada Forest Plan Amendment Record of Decision (USDA 2004), pages 32-34, 36, 54-58, 61-63, and 65-66). This is in accordance with the Multiple Use and Sustained Yield Act of 1960 and the Forest and Rangeland Renewable Resources Planning Act of 1974.

A qualified livestock operator has requested that continued livestock grazing be authorized on the allotments.

2. Action is needed to implement an Allotment Management Plan that, if authorized, would maintain or improve project area resource conditions and achieve the objectives and desired conditions described in the Plumas National Forest Land and Resource Management Plan (USDA 1988), as amended by the Sierra Nevada Forest Plan Amendment Record of Decision (SNFPA ROD, USDA 2004) in regards to riparian areas, meadows, and special aquatic features.

Where consistent with the goals, objectives, and standards and guidelines of Land and Resource Management Plans, the Forest Service makes forage from lands suitable for grazing available to qualified livestock operators. Grazing programs on National Forest System lands must meet standards and guidelines designed to protect natural resources. The 2004 Sierra Nevada Forest Plan Amendment contains direction to assess riparian areas, meadows, and special aquatic features for properly functioning condition during range management analysis (SNFPA pg. 65). It is also Forest Service policy to retain and restore ecological resilience of the National Forest System (NFS) lands to preserve ecological values and a broad range of services to humans and other organisms.

Riparian areas, meadows, streams and fens in the Allotments are important sources of forage for livestock, particularly during the dry summer months when upland forage is sparse. These wet habitats also provide key ecosystem services that include regulating water, filtering sediment, providing important refugia for wildlife species such as the endangered Sierra Nevada yellow-

legged frog (*Rana sierrae*), and supporting high levels of plant biodiversity. Recent hydrologic and vegetative assessments of meadows in the Allotments identified over 50 meadows that were in need of restoration (USDA Forest Service 2014). The primary threats to meadows and fens were conifer encroachment, channel degradation, noxious weeds, historic livestock use, fire impacts, and human use (e.g. Off Highway Vehicle use or road-related impacts).

Currently some riparian areas, meadows, and special aquatic features are not meeting Forest Plan standards along riparian reaches, meadows and fens. There is a need to improve conditions where natural recovery alone will not achieve desired condition and/or modify the management strategy on these allotments to ensure that riparian areas, meadows, and special aquatic features are functioning properly.

Existing Conditions – Riparian Areas, Streams, Meadows, and Fens

- Proper functioning condition assessments show that 14 of 21 riparian reaches (three in Antelope, one in Lights Creek and 10 in Lone Rock), one of four meadows/springs (Antelope Allotment) and nine of 13 fens (Antelope Allotment) within the allotments are functionally at risk (Table 1).
- Long-term effectiveness monitoring indicates that two meadows in the Antelope Allotment and two meadows in the Lone Rock Allotment are in fair range condition with unknown trend and have a significant component of mid-seral vegetation (Table 2).
- Long-term effectiveness monitoring indicates that one meadow in the Lights Creek Allotment was rated as being in poor range condition with unknown trend and has a significant component of early seral (ruderal) vegetation (Table 2).
- A 2014 assessment identified restoration needs in 57 of the Allotment meadows due to a combination of factors that included conifer encroachment, channel degradation, noxious weeds, historic livestock use, and direct human impacts such as OHV use and road erosion.

Desired Conditions – Riparian Areas, Streams, Meadows, and Fens

- Maintain and restore water quality to meet goals of the Clean Water Act and Safe Drinking Water Act, providing water that is fishable, swimmable, and suitable for drinking after normal treatment (SNFPA ROD, pg. 32).
- Maintain and restore spatial and temporal connectivity for aquatic and riparian species within and between watersheds to provide physically, chemically and biologically unobstructed movement for their survival, migration and reproduction (SNFPA ROD, pg. 32).
- Habitat supports viable populations of native and desired non-native plant, invertebrate, and vertebrate riparian and aquatic-dependent species. New introductions of invasive species are prevented. Where invasive species are adversely affecting the viability of native species, the appropriate State and Federal wildlife agencies have reduced impacts to native populations (SNFPA ROD, pg. 42).

- Species composition and structural diversity of plant and animal communities in riparian areas, wetlands, and meadows provide desired habitat conditions and ecological functions (SNFPA ROD, pg. 43).
- In-stream flows are sufficient to sustain desired conditions of riparian, aquatic, wetland, and meadow habitats and keep sediment regimes as close as possible to those with which aquatic and riparian biota evolved (SNFPA ROD, pg. 43).
- The physical structure and condition of stream banks and shorelines minimizes erosion and sustains desired habitat diversity (SNFPA ROD, pg. 43).
- Meadows are hydrologically functional. Sites of accelerated erosion, such as gullies and headcuts are stabilized or recovering. Vegetation roots occur throughout the available soil profile. Meadows with perennial and intermittent streams have the following characteristics: (1) stream energy from high flows is dissipated, reducing erosion and improving water quality, (2) streams filter sediment and capture bedload, aiding floodplain development, (3) meadow conditions enhance floodwater retention and groundwater recharge, and (4) root masses stabilize stream banks against cutting action (SNFPA ROD, pg. 43).
- The distribution and health of biotic communities in special aquatic habitats (such as springs, seeps, vernal pools, fens, bogs, and marshes) are maintained and restored to perpetuate their unique functions and biological diversity by prohibiting or mitigating ground-disturbing activities (SNFPA ROD, S&G #118).
- The ecological status of meadow vegetation is late seral (50 percent or more of the relative cover of the herbaceous layer is late seral with high similarity to the potential natural community). A diversity of age classes of hardwood shrubs is present and regeneration is occurring (SNFPA ROD, pg. 42).
- Where potential exists, riparian woody plants are established and maintained in a healthy condition (SNFPA ROD, S&G #121).
- Maintain vegetation stream bank cover and minimize disturbance (bank sloughing, chiseling, trampling, and other means of exposing bare soil or cutting plant roots) to streambanks and natural lake and pond shorelines caused by resource activities (SNFPA ROD, S&G #103).

3. Action is needed to minimize effects on habitat by legacy disturbance and potential impacts of future grazing, if authorized, on Threatened, Endangered, and sensitive plant and animal species, and/or their habitats.

Continued livestock grazing may impact suitable habitat for Threatened, Endangered, and sensitive species within the allotments. There is a need to ensure that proposed activities would not adversely affect habitat for protected species, including Forest Service Sensitive species confirmed as present on the Allotments and one listed under the Endangered Species Act, for which suitable habitat is present.

Willow flycatchers, a Forest Service Sensitive species, were found during surveys of the Allotments. Suitable habitat includes moderate to high live foliage density, uniform density from the ground to the shrub layer, and abundant riparian deciduous shrubs.

The Allotments contain suitable and proposed critical habitat for Sierra Nevada yellow-legged frogs (SNYLF), a species listed under the Endangered Species Act. SNYLF have been detected within the allotments. Critical Aquatic Refuge (CAR), a land allocation identified under the SNFPA (USDA 2004) for management of SNYLF, also exists within the allotments. There is a need to ensure that grazing would not have adverse impacts on SNYLF habitat and CARs.

Existing Conditions - Willow Flycatcher Habitat

- Two occupied willow flycatcher sites have been confirmed on the Antelope Lake and Lights Creek Allotments. The Antelope Lake and Lights Creek sites meets desired conditions.
- The existing suitable habitat contains scattered riparian deciduous shrubs across the landscape with limited patches of mature riparian shrubs (6.5 ft. to 15 ft. tall). The live foliage density is low to moderate across the landscape and does not reach from the ground to the shrub canopy.

Desired Conditions – Willow Flycatcher Habitat

- Maintain or enhance wet meadow/ willow habitat capability in the beaver ponds adjacent to Little Antelope Creek for Willow Flycatcher enhancement (PNF LRMP 1988, pg. 4-288).
- Cattle graze in meadows with occupied willow flycatcher site only during the late season (after August 15) in the entire meadow or the nest site and associated habitat is protected during the breeding season and the long term sustainability of the suitable habitat is maintained through the use of a meadow management strategy (SNFPA, page 58).
- Suitable habitat consists of live foliage density that is moderate to high and uniform from the ground to the shrub canopy. At least some surface water or saturated soil is within the defended territories during the early part of the breeding season (approximately June 1). The herbaceous community is consistent with high water tables and late seral conditions, and riparian deciduous shrubs are abundant.

Existing Conditions – Sierra Nevada Yellow-legged Frog Habitat and Critical Aquatic Refuge

- Current surveys have confirmed the presence of SNYLFs in both the Antelope and Lone Rock Allotments. Historic detections records show all allotments as having occupied habitat.
- 9,976 acres of Proposed Critical Habitat (PCH) overlaps the three of the four allotments, no PCH is in the Lights Creek Allotment. A portion of the PCH is suitable SNYLF habitat.
- 38,570 acres of two Critical Aquatic Refuges (CARs) overlap three of the four allotments, no CARs are in the Lights Creek Allotment. A portion of the CARs is suitable SNYLF habitat.

- Suitable habitat for Sierra Nevada Yellow-legged frogs (SNYLF) exists within all allotments.
- In the Antelope Allotment, suitable habitat includes approximately 15 lakes/ponds, 66 springs/seeps, 572 acres of meadows, and 13 miles of perennial stream, as well as 64 miles of intermittent creeks on NF lands.
- In the Antelope Lake Allotment, suitable habitat includes approximately one lake, four springs/seeps, 81 acres of meadows, and four miles of perennial stream, as well as seven miles of intermittent creeks on NF lands.
- In the Lights Creek Allotment, suitable habitat includes approximately four lakes/ponds, 93 springs/seeps, 216 acres of meadows, and 14 miles of perennial stream, as well as 68 miles of intermittent creeks on NF lands.
- In the Lone Rock Allotment, suitable habitat includes approximately eight lakes/ponds, 69 springs/seeps, 174 acres of meadows, and 22 miles of perennial stream, as well as 22 miles of intermittent creeks on NF lands.

Desired Conditions – Sierra Nevada Yellow-legged Frog Habitat and Critical Aquatic Refuge

- Riparian Conservation Areas (RCAs) habitats support viable populations of native and desired non-native plant, invertebrate, and vertebrate riparian and aquatic-dependent species (SNFPA, page 42).
- Spatial and temporal connectivity for riparian and aquatic-dependent species within and between watersheds provides physically, chemically and biologically unobstructed movement for their survival, migration and reproduction (SNFPA, page 43).
- The physical structure and condition of stream banks and shorelines minimizes erosion and sustains desired habitat diversity (SNFPA, page 43).
- Critical aquatic refuges provide habitat for native fish, amphibian and aquatic invertebrate populations. Remnant plant and animal populations in aquatic communities are maintained and restored (SNFPA, page 44).
- Streams in meadows, lower elevation grasslands, and hardwood ecosystems have vegetation and channel bank conditions that approach historic potential (SNFPA, page 44).
- Water quality meets State stream standards (SNFPA, page 44).

4. Continued monitoring of the Allotments is needed to determine if Forest Plan standards and guidelines are being met and if rangeland conditions are meeting or moving towards desired conditions. If grazing is authorized, adaptive management strategies are needed to monitor and verify rangeland conditions and trends, and implement management options that can flexibly respond to potential environmental concerns.

There is a need to formally establish management for this allotment that is effective and responsive to changing resource conditions. Implementation and effectiveness monitoring and adaptive management allow the Forest Service to continually review, assess, and modify the proposed grazing practices, if authorized, on the Allotments to meet resource management objectives with the goal of working toward meeting desired conditions.

The Plumas National Forest Land and Resource Management Plan (PNF LRMP, USDA 1988), as amended by the Sierra Nevada Forest Plan Amendment (USDA 2004), establishes standards and guidelines for grazing management. If grazing is authorized, these standards and guidelines would be incorporated into the Allotment Management Plan (AMP) and implemented through the term grazing permit and annual operating instructions (AOIs). Monitoring information may result in changes in grazing practices, which are incorporated into AOIs.

There is a need to incorporate additional flexibility through adaptive management actions into the management of the allotments. Adaptive management options would allow the Forest Service and individual grazing permit holders to adapt management to changing resource conditions or change management options in order to meet desired conditions. The need to authorize grazing with an effective and timely response to changing environmental conditions, such as drought, fire, or seasonal fluctuations in forage production, is essential to managing for maintenance and improvement in desired rangeland conditions. Therefore, there is a need to incorporate formally into the management of this allotment the adaptive management principles established in 2004 as Forest Service Policy in Chapter 90 of Forest Service Handbook (FSH) 2209.13.

Table 1. Existing stream, waterbody, and fen conditions by Allotment*.

Allotment	Associated Meadow ID	2015 Lotic Sites	2015 Lentic Sites	2015 Fen Sites
Antelope				
	34A (wheeler)	8AWP = PFC		
	34B (Wheeler Parker)	8AWP = PFC		AWP-Fen1 = FAR AWP-Fen2 = PFC
	Long Beaver Ponds (71)	5AWP = FAR		AWP-Fen3 = FAR
	Lowe Flat (72)	28ALFP = PFC 29ALFP = PFC		ALFP-Fen1 = FAR ALFP-Fen2 = FAR ALFP-Fen3 = FAR ALFP-Fen4 = FAR ALFP-Fen5 = FAR ALFP-Fen6 = PFC
	South (83)	10ASP = FAR	ASP1 = PFC	
Lights Creek				
	64	3LC = FAR		
Lone Rock				
	1	1LR = FAR		
	6	4LR = FAR		
	7	5LR = PFC		

	10	2LR = FAR		
	11			LR-FEN1 = PFC
	16	20LR = FAR		
	17	20LR = FAR		
	19	16A-LR = Far 16B-LR = FAR		
	34A (wheeler)	8AWP = PFC		
	50	11LR = FAR		
	52	11LR = FAR		
	00A	17LR = FAR		
	18B	12LR = PFC		
	18C	19LR = FAR		
	20 (South)	16C-LR = FAR		
*PFC = Proper Functioning Condition, FAR = Functioning at Risk				

Table 2. Existing meadow conditions by Allotment*

Allotment	Meadow ID	2015 Condition/Trend Score
Antelope		
	14	Good
	63	Good
	34A (wheeler)	Good
	34B (Wheeler Parker)	Fair Good/Stable
	Hallet (70)	Fair
	Long Beaver Ponds (71)	Good
	Lowe Flat (72)	Good Good/Stable PNC/Up**
	South (83)	Good
Antelope Lake		
	27	Excellent
	Beaver Dam (80)	Excellent Excellent/Stable
	Boulder Creek (81)	Excellent
Lights Creek		
	62	Excellent
	64	Poor
	57 (Indicator)	Good
Lone Rock		
	6	Good
	10	Fair

	11	Fair
	27	Excellent
	34A (wheeler)	Good
	50	Excellent
	52	Good
	00B	Good
	18B	Excellent
	20 (South)	Good
<p>*Excellent = plant functional groups indicative of late seral conditions; Good = plant functional groups indicative of mid-late seral conditions; Fair = plant functional groups indicative of mid seral conditions; Poor = plant functional groups indicative of early seral conditions ** Riparian greenline score: PNC = Potential Natural Community</p>		

Proposed Action

The Forest Service is proposing the actions listed below on identified National Forest System (NFS) lands within the Moonlight Range Allotments Project to meet the Need for the Proposal, described above. All components of the Proposed Action, including existing range features, monitoring plots, and proposed improvements are shown in Figure 1 and Figure 2.

This Proposed Action consists of, in general terms, the following six actions:

1. Authorize cattle grazing;
2. Modify the grazing management strategy;
3. Implement specific resource management measures to improve proper functioning condition within identified meadows, stream reaches and fens;
4. Fence off certain sensitive areas;
5. Restore identified meadow systems; and
6. Monitor and adapt, as needed, in accordance with an adaptive management strategy.

Following is a detailed description of the actions which include all applicable PNF LRMP, as amended (USDA 1988 and USDA 2004 a, b), Standards and Guidelines (S&Gs). Any term grazing permit issued for the Moonlight Range Project would include all S&Gs and any additional more restrictive measures identified under Table 5. .

In addition, the Proposed Action is consistent with Best Management Practices (BMPs) to protect water quality for range management as specified in the Pacific Southwest Region Water Quality Management Handbook (USDA 2011). These BMPs specifically address rangeland management planning, rangeland permit administration (monitoring and adaptive management), and rangeland improvements to protect, maintain, or improve water and aquatic and riparian resources and associated beneficial uses. Application of these BMPs is reflected in the Proposed Action's design features, resource management measures (mitigations), and monitoring and adaptive management strategy.

The Proposed Action incorporates changes to current permitted use and includes management strategies and adaptive management options that would address identified gaps between existing conditions and desired conditions, as described in the Need for the Proposal.

1. Authorize cattle grazing on the Moonlight Range allotments consistent with the S&Gs of the Plumas National Forest Land and Resource Management Plan (PNF LRMP, USDA 1988), as amended by the Sierra Nevada Forest Plan Amendment (SNFPA, USDA 2004).
2. Permitted grazing use on NFS lands within the Moonlight Range allotments would not exceed the head month (HM) numbers in Table 3. A head month is calculated by multiplying the number of mature cattle (one steer or one cow with calf) by the number of months of use.

The grazing season within each allotment would vary based upon weather and climate conditions, current growing conditions, and the need to meet end of season grazing utilization standards. The on-date would be based on range readiness as demonstrated by soils being dry enough to avoid hoof prints of one-half inch or deeper. The off-date would be mandated by meeting end of season grazing utilization standards. The utilization standards would be: less than or equal to 40 percent utilization of meadow forage species, less than or equal to 20 percent utilization of riparian shrubs, and less than 20 percent bank alteration. Livestock would be removed from allotments and/or pastures before utilization standards are met. Different utilization standards may apply for individual allotments/pastures or when specific conditions occur, as follows:

- a. Pastures with meadows in late seral status and meadow-associated species not being impacted may be allowed to be grazed up to a maximum of 60 percent utilization of grass and grass-like plants (based on SNFPA S&G #120). Before considering this increase in meadow utilization, monitoring would be conducted to evaluate whether meadow-associated species are or are not being impacted. Determinations about whether meadow-associated species are being impacted will be made based on the monitoring results. The decision regarding utilization levels would be made during permit administration in consultation with an interdisciplinary team.
- b. Completely rest meadow 64 from grazing in Lights Creek Allotment which was rated in poor condition;
- c. Exclude any use of salt and mineral supplements within Riparian Conservation Areas, and near developed water sources, fens, springs, wet meadows, sensitive riparian habitats, roads, known cultural sites, sensitive wildlife areas, noxious weed infestations, sensitive plant areas, and areas with inadequate forage.
- d. The proposed season is in Table 3. Within this proposed season, grazing use could be adjusted due to either drought conditions necessitating an earlier on date, excessive precipitation which could preclude entering the Allotments on the normal on-date, or other factors influencing growing conditions and range readiness. Grazing would not be allowed outside of the analyzed season.

Table 3. Current and proposed permitted use for the Moonlight Range allotments.

Allotment	Current Permitted Use (HM)	Current Season of Use	Proposed Action Permitted Use (HM)	Proposed Action Season of Use	Current/Proposed Grazing System
Antelope	612 "on" 61 "off"	June 15 to September 15	612 "on" 61 "off"	May 1 to November 30	Rotational
Antelope Lake	158	September 3 to October 4	158	September 3 to October 4	Rotational

Lights Creek	73 "on" 49 "off"	June 1 to September 1	73 "on" 49 "off"	May 1 to November 30	Continuous
Lone Rock	351 "on" 544 "off"	June 16 to September 15	351 "on" 544 "off"	May 1 to November 30	Continuous

3. Implement specific resource management measures to improve proper functioning condition within identified meadows, stream reaches and fens (also described in Table 5.). Listed below are general proposed action, for a specific list see Table 5. :
 - a. In-channel stream restoration work to improve the function of the channel utilizing mechanical equipment, large woody debris, and/or beaver analogs;
 - b. Removal of failing spring boxes and repair of culverts;
 - c. Removal of encroaching conifers from meadows either by hand or with mechanical equipment;
 - d. Revegetation after proposed restoration work as needed;
 - e. Temporary fencing to protect restoration work or permanent fencing to protect sensitive resources.
4. All existing permanent range improvements would be maintained by the permittees. Where fences were damaged by wildfire, the Forest Service would be responsible for materials and reconstruction.
 - a. 3.68 miles of fence (including drift fencing, and one enclosure at Hallet Meadow), and one corral in the Antelope Allotment.
 - b. 3.43 miles of fence in the Antelope Lake Allotment,
 - c. 1.55 miles of fence in the Lone Rock Allotment (Figure 1) including:
 - i. Meadow 0A enclosure fence (Figure 1).
 - ii. Meadow 0B enclosure fence (Figure 1).
 - iii. Meadows 10 and 11 enclosure fence (Figure 1).
5. In addition to the existing fences the Forest Service would construct the following improvements to mitigate potential impacts on water quality (BMPs 8.1 and 8.3), special aquatic features and aspen stands, as well as facilitate livestock management. Depending on the fence, maintenance responsibility would fall on either permittees or the Forest Service (see below). During construction of all fences, Plumas NF staff would ensure that natural and cultural resources are not impacted during implementation.
 - a. Fen (ASP 2) and associated meadow within Antelope Allotment – install permanent enclosure fences surrounding fen and portions of adjacent meadows (Figure 2). The purpose of the fences is to protect the fen (which has more than 10% bare peat), and protect botanical resources such as edible plants and basket

making materials which the Susanville Indian Rancheria has expressed interest in using. Until the Forest Service constructs the permanent fence, the Forest will provide temporary electric fence supplies to the permittee. The permittee would be in charge of putting up and taking down the temporary electric fence around the fen prior to using the allotment.

- b. Antelope Allotment Corral– one new corral (approximately ½ acre in size) would be constructed near Wheeler Sheep Camp (Meadow 34B) in order to facilitate management of livestock within the allotment. The permittee would be responsible for maintenance of the corral (Figure 1).
- c. Antelope Allotment trough– one new trough would be constructed to provide an off-channel water source for livestock and reduce the potential for conflicts with dispersed recreation.
- d. Meadow 34B Antelope Allotment– a temporary exclosure fence would be installed and maintained by the Forest Service to facilitate restoration of fen AWP 1.
- e. Meadow 71 Antelope Allotment– exclosure fence surrounding fens and springs. The proposal is to either install a permanent, barbed wire fence around two fens and the larger riparian area (approximately 18 acres) or two smaller fences around the fens (approximately 8 acres). Forest wildlife, watershed, and fisheries programs would be in charge of the construction and maintenance (Figure 2).
- f. Meadow 72 Antelope Allotment – Install a permanent, barbed wire fence around approximately 10-20 acres of Boulder Creek at Lowe Flat and associated meadow and fen complex (Figure 2). The purpose of the fence is to distribute livestock use away from aquatic resources and into other areas of the pasture. The permittee would be responsible for maintenance of the fence.
- g. Meadow 78 Antelope Allotment – a temporary exclosure fence would be installed and maintained by the Forest Service after watershed restoration work has been completed to facilitate restoration of 12ASP.
- h. Meadow 20 Lone Rock Allotment – Replace the existing temporary fence with a permanent fence which wildlife and fisheries would be in charge of the construction and maintenance (Figure 2). The purpose of this fence would be to protect Sierra Nevada Yellow-Legged frog populations. The monitoring area associated with this allotment would need to be moved outside the excluded area.
- i. Aspen stands 65, 87, 89a, and 100 – temporarily install a barbed wire fence for stand 87. Forest ecology program would be in charge of construction and maintenance until aspen regeneration meets desired height. Temporarily fence remaining aspen stands using hinging or buck and pole fences made from native

materials such as conifers after encroachment has been removed. Monitor these stands for browse (20% or less of annual leader growth utilized, no recruitment of stems >5 feet over a three year period, significant hedging) yearly until new aspen suckers grow past browse height (>5 feet). If hinging and/or buck and pole fences are ineffective and browse exceeds standards, assess additional fencing requirements and construct a temporary barbed wire fence around stands if necessary. The Forest would construct temporary fences using native materials and maintain exclosures until aspen regeneration meets desired height. The permittee would be responsible for temporary barbed wire fence if standards are not met. The forest would construct temporary barbed wire fence if needed, but permittees would be responsible for maintenance.

6. Implement proposed actions in order restore meadow systems within the allotment boundaries (Table 4). Below is a list of general activities that could take place separately or in combination with each other. A more detailed description per meadow can be found in Table 4:
 - a. Removal of conifers encroaching into meadow systems both by hand and mechanically.
 - b. Stabilize active headcuts in meadows by placing rock (>5 inches in diameter) and large woody debris in the scour pool below the headcut and upstream throughout the unstable reach the channel. Heavy equipment would be used to place material and re-contour stream banks at larger headcut sites that are accessible. Inaccessible and smaller headcuts would be treated by hand using similar techniques Native vegetation would be planted to improve riparian habitat and hasten channel stability.
 - c. Promote beaver activity by installing beaver analogs into the stream channel.
 - d. Address roads that impair meadow function by either obliterating the road or fixing the culvert.
 - e. Revegetate areas that were disturbed by restoration activities or other areas that have been identified for treatment.
 - f. Temporary and permanent fencing maybe proposed to protect restoration treatments in the short-term or a long term fence may be proposed if needed.

Table 4. Meadow restoration actions in the Moonlight Range Project. These are additional meadows that were not captured in Table 5. .

Allotment	Meadow ID	Proposed Restoration Needs
Antelope		
	13, 14	Hand thin encroaching conifers, large woody debris (LWD), revegetation

	63, 75, 76	Hand thin encroaching conifers, LWD, revegetation, install beaver analogs
	Hallet (70)	LWD, revegetation, fence repair, install beaver analogs
	34A (Wheeler)	Mechanically thin encroaching conifers, LWD, fence, mechanically improve headcut
	15, 33	Mechanically thin encroaching conifers, LWD, revegetation
Antelope Lake		
	27	Hand thin encroaching conifers, LWD, revegetation, treat headcut, fence repair
Lights Creek		
	77	Hand thin encroaching conifers, LWD
	65	LWD, revegetation, road obliterate
	55, 56, 62	Mechanically thin encroaching conifers, LWD, revegetation
	57 (Indicator)	Mechanically thin encroaching conifers, LWD, revegetation, install beaver analogs
Lone Rock		
	9, 39	Hand thin encroaching conifers
	03B	Hand thin encroaching conifers, LWD
	13, 21, 36, 38, 40, 45	Hand thin encroaching conifers, LWD, revegetation
	50	Hand thin encroaching conifers, LWD, revegetation, install beaver analogs
	22	Hand thin encroaching conifers, LWD, revegetation
	27	Hand thin encroaching conifers, LWD, revegetation, repair headcut, fence repair
	7	Hand thin encroaching conifers, LWD, revegetation, repair headcut
	37	Hand thin encroaching conifers, LWD, revegetation, non-system road obliteration
	5, 8 18A, 18C, 42A, 42B, 43	LWD, revegetation
	28A	LWD, revegetation, culvert upgrade/addition
	12	Mechanical re-contour stream channel, LWD, revegetation
	34A (wheeler)	Mechanically thin encroaching conifers, LWD, fence, mechanical treatment of headcut
	03A, 2, 44	Mechanically thin encroaching conifers, LWD, revegetation
	00C	Mechanically thin encroaching conifers, LWD, revegetation, headcut
	4	Mechanically thin encroaching conifers, mechanically re-contour stream channel, LWD, revegetation

7. Implement the Proposed Action's Adaptive Management Strategy (described in Table 5). The proposed monitoring activities would support an efficient and successful adaptive management strategy, designed to maintain or continue movement toward desired rangeland conditions. If monitoring indicates that a threshold for concern is reached, the appropriate adaptive management strategy would be implemented.

Table 5. Proposed actions and adaptive management strategy to address areas of concern based on existing conditions in the Moonlights Allotments.

Allotment	Meadow Number	Existing condition and trend ^{a,b}	Reason for Existing Condition	Proposed Action	Authorize grazing immediately?	Conditions required to authorize grazing	Threshold for Concern (TOC)	Adaptive management if TOC is reached	Monitoring / frequency
Antelope Allotment	Meadow 34B	AWP Fen 1 - FAR AWP Fen 2 - PFC 8AWP – PFC Meadow Condition Score – Fair	AWP Fen 1 – old spring box and hoof action have created a channel through the fen	Remove the metal barrel and install sedge/rush mats, seed the area that is disturbed. Temporarily fence ^c the area for five years after the work has been completed. Potentially install LWD and/or beaver analogs in stream channel. Mechanically thin encroaching conifers. Establish a permanent photo point and bare peat transect.	AWP 1: No Meadow: Yes	Maintain or improve PFC trend at AWP 1.	Declining trend in PFC at AWP 1.	Permanently fence the AWP 1 fen.	PFC five years after restoration work has been complete at AWP 1: reread the bare peat transect. PFC five years after fence has been removed to determine trend at AWP 1.
	Meadow 71	5AWP – FAR with an apparent downward trend Fen 3 – FAR with an apparent downward trend	The springs have been trampled and there is trailing, hoof punching. The headcut appears to be stable.	Provide for off-site watering, fix the two culverts that are too small in size, install beaver analogs and/or LWD in the channel. Mechanically remove encroaching conifers. Revegetate area after restoration work has been completed as needed. There are two options with fencing: <ul style="list-style-type: none"> - Build a two smaller fences around the fens - Build a larger one approx. 18 acres that encompasses the whole wet area: springs, fens, fen like areas, and channel. 	Yes	Maintain or improve stabilizing vegetation along streambanks	<80% cover of stabilizing vegetation AND a decline in stabilizing vegetation along streambanks	Rest from grazing until conditions required to authorize grazing are reached.	
	Meadow 72	28AFLP and 29AFLP – PFC AFLP Fen 1/ Fen 2/ Fen 3/ Fen 4 - FAR with an apparent downward trend AFLP Fen 5 – FAR with an apparent upward trend AFLP Fen 6 - PFC	Incised channel	Obliterate road which blocks the channel, install grade control structure, place LWD and/or beaver analogs in channel and permanently fence larger area (approx. 20 feet on either side of stream channel) (approx. 1-2 acres in size). Revegetate after restoration activities as needed. Head cut repair in Fens 1,2,3 and/or fence	Yes				

Allotment	Meadow Number	Existing condition and trend ^{a,b}	Reason for Existing Condition	Proposed Action	Authorize grazing immediately?	Conditions required to authorize grazing	Threshold for Concern (TOC)	Adaptive management if TOC is reached	Monitoring / frequency
	Meadow 78	12ASP - FAR with an apparent downward trend	Active headcut	Hand thin conifer encroachment, mechanically treat the headcuts, and temporary fence those locations.	Yes	Maintain or improve PFC trend	Declining trend in PFC	Permanently fence area until trend is up	Redo PFC 5 years after watershed work has been completed.
	Meadow 83	10ASP – FAR with an apparent downward trend ASP 1 - PFC	Old wooden structures were installed in channel creating a single channel instead of a braided system.	Remove wooden structures, reshape channel in 3-4 separate locations, temporary fence those locations, seed areas that have mechanical stream treatments with sedges.	Yes	Maintain or improve PFC trend	Declining trend in PFC	Permanently fence area until trend is up.	Redo PFC 5 years after watershed work has been completed.
	Wheeler Pasture Pierce Creek	PFC will be completed this field season and depending on results further actions could be proposed.							Install designated monitoring area. Measure every 2 years.
	ASP Fen 2	FAR with an apparent downward trend	Conifer encroachment, bare peat	Fence the fen and a portion of the willows within the meadow, and a portion of the adjacent meadow. The fen needs to be fenced (temporary electric fence) prior to cattle using the allotment.	No				
Lights Creek Allotment	Meadow 64	3LC – FAR with an apparent downward trend Meadow Condition Rating - poor	Meadow condition was rated at poor with more than 13% bare ground.	Per the SNFPA standard and guide #120 this area must be rested from grazing until they have recovered and have moved to mid- or late seral status. Remove encroaching trees into the meadow, obliterate non-system road, and revegetate the area. Install beaver analogs	No	Mid – to late seral status	Continue in poor condition after five years of rest AND Bare ground increases	Fence or jackstraw material around the meadow	After 5 years of rest redo PFC and Ratliff meadow assessment.

Allotment	Meadow Number	Existing condition and trend ^{a,b}	Reason for Existing Condition	Proposed Action	Authorize grazing immediately?	Conditions required to authorize grazing	Threshold for Concern (TOC)	Adaptive management if TOC is reached	Monitoring / frequency
Lone Rock Allotment	Meadow OA	17 LR – FAR with an apparent downward trend	Headcuts and culver is channelizing overland water flow.	Fix the headcut, place LWD in channel, replace culvert, and remove the existing non-functional fence. Mechanically thin encroaching conifers. Revegetate after restoration activities as needed.	Yes				
	Meadow OB			Keep the existing fence. Mechanically thin encroaching conifers. Mechanically treat headcut, place LWD in channel and revegetate the area as needed.	Yes				
	Meadow 1	1LR – FAR with an apparent upward trend	Unstable stream reaches	Rehabilitate existing fence. Mechanically thin encroaching conifers.	Yes				
	Meadow 6	4LR – FAR with an apparent downward trend	Multiple headcuts	Hand treatment of the headcut and place LWD in channel. Mechanically thin encroaching conifers. Revegetate after restoration activities as needed.	Yes				
	Meadow 10 and 11	2LR – FAR with an apparent downward trend Both meadows have fair scores for meadow condition.	Old Willow Creek pond and plug failure.	Install beaver analogs and large wood debris, fix the permanent fence. Meadow 10 – hand thin encroaching conifers. Meadow 11 - Mechanically thin encroaching conifers.	Yes				Re-monitor the meadow condition at 5 years and 10 years.
	Meadow 16 and 17	20LR – FAR with an apparent downward trend	Channel is not functioning at it's potential.	Address stream bank alteration through permit administration and add a designated monitoring area. Mechanically thin encroaching conifers.	Yes	Maintain or improve PFC trend	Declining trend in PFC	Permanently fence the areas.	Re-monitor PFC in 5 years. Add a designated monitoring area to Lone Rock meadow 16.

Allotment	Meadow Number	Existing condition and trend ^{a,b}	Reason for Existing Condition	Proposed Action	Authorize grazing immediately?	Conditions required to authorize grazing	Threshold for Concern (TOC)	Adaptive management if TOC is reached	Monitoring / frequency
				Revegetate after restoration activities as needed.					
	Meadow 18B	#LR – PFC Fen	Will be assessed	Address impacts to fen through permit administration. Potentially place LWD in channel and revegetate as necessary.	Yes	Maintain or improve PFC trend	Declining trend in PFC	Permanently fence the fen.	Re-monitor PFC in 5 years.
	Meadow 19	16A LR – FAR with an apparent downward trend. 16B LR – FAR with an apparent upward trend.	Multiple headcuts.	Mechanically treat the larger headcut, fix the culvert, treat smaller headcut by hand, use trees as fencing option to protect restoration work. Hand thin encroaching conifers. Revegetate after restoration activities as needed.	Yes	Maintain or improve PFC trend	Declining trend in PFC	Permanently fence until trend is up	Re-monitor PFC in 5 years.
	Meadow 20	16C LR – FAR with an apparent upward trend.	Critical and occupied habitat for the Sierra Nevada yellow-legged frog.	Replace the existing temporary fence with a permanent fence ^d . Move the key area outside of the fence near meadow 19b. Hand thin encroaching conifers. Mechanically treat the headcut and place LWD in channel. Revegetate after restoration activities as needed. Place OHV barriers on a non-system road.	Yes				
	Meadow 52	11LR – FAR with an apparent upward trend	Multiple headcuts	Mechanically treat the headcuts, install LWD and/or beaver analogs in channel. Mechanically thin encroaching conifers. Revegetate after restoration activities as needed.	Yes	Maintain or improve PFC trend	Declining trend in PFC	Temporarily fence area until trend is up.	Monitor the effectiveness of the headcut treatments.

c – the temporary fence would be maintained and installed by the Forest Service.

d – wildlife/fisheries will construct and maintain this fence.

Design Criteria

The following design criteria are common to all allotments for the Proposed Action, and are based on the 2004 SNFPA standards and guidelines. They are organized in six areas of emphasis for resource management (SNFPA ROD 2004): 1) meadow condition; 2) percent meadow use; 3) streams, lakeshores, and special aquatic features; 4) riparian shrubs; 5) soils; and 6) willow flycatchers. For additional standard and guidelines regarding specific resource areas refer to the specialists reports in the project record.

If monitoring indicates that standards have not been met, this would serve as an indication that a change in management may need to take place. Management actions such as reducing livestock numbers, shortening the grazing season, or other strategies would be implemented as necessary under permit administration to meet these standards.

Meadow Condition

The meadow ecological status has been determined for each pasture (Table 1, monitoring locations shown in Figure 1). The meadow ecological status would be one component considered in determining utilization levels as described above in 2b and in the SNFPA ROD, S&G #120. Meadow ecological condition (seral status) would be analyzed every 5 years. If meadow ecological status is determined to be moving in a downward trend, grazing would be modified or suspended (SNFPA ROD, S&G #120).

- Degraded meadows (such as those in early-seral status with greater than 10 percent of the meadow area in bare soil and showing active erosion) would be put in 'rest from grazing' status until they have recovered and have moved to mid- or late-seral status (SNFPA ROD, S&G #120).
- Ensure that characteristics of special aquatic features are at Proper Functioning Condition (SNFPA ROD, S&G #117).
- Prohibit or mitigate ground-disturbing activities that adversely affect hydrologic processes that maintain water flow, water quality or water temperature critical to sustaining bog and fen ecosystems and plant species that depend on these ecosystems (SNFPA ROD, S&G #118).
- Assess fens that are Functionally-At-Risk for Proper Functioning Condition and amount of bare peat every other year. If fen condition is determined to be moving in a downward trend, grazing would be modified.

Percent Meadow Use

Under season-long grazing:

- For meadows in early seral status: limit livestock utilization of grass and grass-like plants to 30 percent (or minimum six-inch stubble height).
- For meadows in late seral status: limit livestock utilization of grass and grass-like plants to a maximum of 40 percent (or minimum four-inch stubble height).

Under intensive grazing systems (such as rest-rotation and deferred rotation) where meadows are receiving a period of rest, utilization levels can be higher than the levels described above if the meadow is maintained in late seral status and meadow-associated species are not being impacted. Degraded meadows (such as those in early status with greater than ten percent of the meadow area in bare soil and active erosion) require total rest from grazing until they have recovered and have moved to mid or late seral status (SNFPA ROD, S&G #120).

Streams, Lakeshores and Special Aquatic Features

Prevent disturbance to streambanks and natural lake and pond shorelines caused by resource activities (for example, livestock, off-highway vehicles, and dispersed recreation) from exceeding 20 percent of stream reach or 20 percent of natural lake and pond shorelines. Disturbance includes bank sloughing, chiseling, trampling, or other means of exposing bare soil or cutting plant roots (SNFPA ROD, S&G #103).

- Ensure that characteristics of special aquatic features are at Proper Functioning Condition (SNFPA ROD, S&G #117).

Riparian Shrubs

Limit incidental utilization by cattle to a maximum of 20 percent of annual leader growth of mature riparian shrubs, including willow and aspen, and no more than 20 percent of seedlings. Remove cattle from an area of the allotment when browsing indicates a change in livestock preference from grazing grasses to browsing woody riparian vegetation (SNFPA ROD, S&G #121).

Soils

Recommend restoration practices in: (1) areas with compaction in excess of soil quality standards, (2) areas with lowered water tables, or (3) areas that are either actively down cutting or that have historic gullies. Identify other management practices, for example, road building, recreational use, grazing, and timber harvests that may be contributing to the observed degradation (SNFPA ROD, S&G #122).

Willow Flycatcher

- In meadows with occupied willow flycatcher sites, allow only late-season grazing (after August 15) in the entire meadow (SNFPA ROD, S&G #57) OR
- The late-season grazing requirement described above may be waived if an interdisciplinary team has developed a site-specific meadow management strategy (SNFPA ROD, S&G #58). For the North Alkali pasture, the exclosure fence would serve this purpose, as it would protect suitable willow habitat at this site. After implementation of the exclosure fence in North Alkali, the late-season grazing restriction would be lifted for this pasture.
- If willow habitat conditions are not supporting the willow flycatcher or trend downward, modify or suspend grazing (SNFPA ROD, S&G #59).

Mitigations

Mitigation measures have been developed to limit the potential for adverse effects associated with proposed activities.

- Proposed project design criteria also include implementation of soil and water Best Management Practices (BMPs).
- Range improvements include: 8.66 miles of existing fence (including exclosures); four new exclosures and one temporary exclosure; seven potential new fences as an adaptive management option; one existing corral and one new corral; and one water development (trough).
- Necessary techniques would be used to achieve proper distribution or lessen the impact of grazing on sensitive areas. Practices include herding and salting. Herding techniques would be used to better distribute cattle across the pastures, moving cattle away from riparian areas and toward timbered areas. Salt and supplements would be placed in timbered areas away from sensitive resources described above under 2c. Salt or mineral blocks would be placed in approved areas of light use and moved frequently.
- All proposed range improvements would be surveyed for Threatened, Endangered or Sensitive species (TES) prior to implementing any new ground-disturbing activities. Facilities would be designed and constructed to have no adverse effect on TES species.
- All proposed range improvements (i.e. structures, fencing, water troughs, etc.) would be surveyed for cultural resources prior to any ground-disturbing activities. Facilities would be built or modified to avoid impacts to sites. Range facilities would be located so as to avoid concentration of livestock on identified cultural resource sites. If unrecorded sites are discovered during the course of project implementation, activities would cease and the District or Forest Archeologist would be notified.
- Include provisions for, “Cleaning of Equipment and Protection of Habitat of Sensitive Species” in contract provisions for improvements in the project area, such as culvert replacement or fence building that involve ground disturbance.
- Prevention/Cleaning: Require all off-road equipment and vehicles (Forest Service and contracted) used for project implementation to be weed-free. Clean all equipment and vehicles of all attached mud, dirt and plant parts. This will be done at a vehicle washing station or steam cleaning facility before the equipment and vehicles enter the project area. Cleaning is not required for vehicles that will stay on the roadway. Also, all off-road equipment must be cleaned prior to leaving areas infested with noxious weeds.
- For additional Threatened, Endangered, or Sensitive (TES) plant species found during the life of this project, an assessment would be done and management prescriptions applied.
- Prevention/Road Construction, Reconstruction, and Maintenance: All earth-moving equipment, gravel, fill, or other materials need to be weed free. Use onsite sand, gravel, rock, or organic matter where possible.

- Prevention/Staging Areas: Do not stage equipment, materials, or crews in noxious weed infested areas where there is a risk of spread to areas of low infestation.
- Small infestations identified during project implementation will be evaluated for treatment or “flagged and avoided,” if practical, according to the species present and project constraints. If larger infestations are identified after implementation, they should be isolated and avoided with equipment (and equipment washed as above).
- All new water developments (i.e. troughs, etc.) will have an approved wildlife escape ramp installed. All existing water developments (i.e. troughs, etc.) will be retrofitted with an approved wildlife escape ramp.

Monitoring Strategy

The monitoring strategy for the Moonlight allotments consists of both implementation monitoring and effectiveness monitoring, described below. If grazing is authorized, the Forest Service would invite the permittee to participate in monitoring. If monitoring indicates that desired conditions are not being achieved, management would be modified under permit administration. Monitoring would be specified every year in the Annual Operating Instructions. Monitoring is an essential component of the adaptive management strategy described in Table 4, providing the means to assess whether management actions are effective in meeting specified goals and objectives.

Monitoring would be conducted at representative areas that have been established in a number of locations on the Allotments.

Implementation Monitoring

Implementation monitoring would be conducted to ensure that the parameters of the decision are being implemented as described.

Annual compliance monitoring of standards and guidelines would be conducted as required through grazing permit administration, which would include Annual Operating Instructions (AOIs), grazing utilization monitoring, and enforcement of the allowable utilization standards (Forest Service Handbook, 2209.13, Chapter 10). This would involve inspections to ensure that all livestock and grazing management measures stipulated in permits, AMPs and AOIs are being implemented (e.g. proper livestock distribution, cattle numbers, on/off dates, maintenance of improvements, mitigation measures). Non-compliance would be handled through permit administration following direction in Region 5 Range Forest Service Handbook (FSH 2209.13.16.2) - Suspension or Cancellation of Grazing Permits.

Utilization monitoring would occur on all pastures within the allotment to ensure compliance with the SNFPA standards and guidelines for percent meadow utilization, percent stream bank alteration, and percent riparian shrub utilization. Stream bank alteration would only be monitored in pastures that include perennial or intermittent streams.

Utilization standards would serve as guidelines for a change in management if monitoring indicates the standards have been exceeded. Under the authority of permit administration, management actions such as reducing livestock numbers, shortening the grazing season, or other strategies would be implemented as necessary to meet the utilization standards.

Implementation monitoring would occur at established Monitoring Areas as shown in Figure 1. Monitoring areas are generally located in meadows adjacent to creeks. These locations have been selected based on the assumption that cattle will use these areas first; therefore, if utilization standards are met at these monitoring areas, the remainder of the pasture would be subject to less use and would also be in compliance.

Effectiveness Monitoring

Effectiveness monitoring would be conducted to assess whether the project design criteria and mitigation measures are performing in achieving their intended effects. This monitoring would provide information on whether desired conditions are being met and whether trends are stable, improving, or declining. Effectiveness monitoring would occur at various locations and time intervals depending on the goal of the monitoring as described below and in Table 4. Monitoring would include: meadow ecological condition (meadow seral stage), fen disturbance (percent bare peat), and proper functioning condition (PFC) of streams and fens. If effectiveness monitoring shows that desired resource conditions are not meeting or moving towards desired conditions, grazing strategies would be modified under permit administration.

Additional monitoring may be done if necessary to provide information that would be used to determine if management is moving resources toward desired conditions. Review of monitoring methodologies and results would be done with an interdisciplinary team.

Meadow ecological condition (seral stage) and trend data would be collected to determine if meadow ecological conditions are stable or moving in an upwards or downwards trend. This monitoring would be conducted every three to five years at Monitoring Areas as shown in Figure 1 (SNFPA ROD, S&G 120).

Monitoring to address the Adaptive Management Strategy is described in Table 4. If monitoring shows that the Threshold for Concern (TOC) has been reached, the adaptive management strategy would be employed until monitoring results indicate that conditions necessary for authorizing grazing are restored.

Monitoring of stream condition using the PFC protocol would occur on streams that have been identified in Table 5.

Additional monitoring would include:

- **Best Management Practices (BMP) Monitoring:** Use the Forest Service's Pacific Southwest (Region 5) Best Management Practices Evaluation Program protocol to investigate whether grazing standards and guidelines are effective at protecting water quality and beneficial uses of water. Approximately three allotments are randomly selected annually on the Plumas NF for Range BMP Monitoring. This monitoring provides feedback to the Forest that enables evaluation of the effectiveness of

management practices used. Monitoring is also used to verify the assumptions and models used in planning.

- Meadow monitoring plots (Weixelman Plots) have been established in some meadows within the Moonlight Range allotments within the past 15 years as part of Forest Service Pacific Southwest Region's Long Term Meadow Ecological Condition Survey. These plots provide information on plant species composition and vegetative seral stage that can be used to adjust management actions in the allotment.

Next Steps

Responsible Officials

Acting Mt. Hough District Ranger Janine Book and Acting Beckwourth District Ranger Matthew Jedra, are the Responsible Officials.

Nature of Decision to be Made

After review of the environmental analysis and public comments, the Responsible Officials will decide to implement this proposal, implement an alternative that moves the area towards the desired condition, or not to implement any project at this time.

Anticipated timeline

Scoping comments will be used to develop issues or alternatives for analysis in an Environmental Assessment. The Plumas National Forest anticipates publishing an Environmental Assessment for public comment in late summer 2016. Following review of public comments on the Environmental Assessment, draft decision is anticipated in Winter of 2016. Implementation could begin in 2017.

Comments Welcome

As you review and consider the proposed land management action, we encourage you to let us know if you have any suggestions, comments, or concerns – we want to hear them all. Are we missing something? Tell us. Know that we are dedicated to responsible conservation, collaboration and applying the best available science along with local knowledge. The feedback we get from our community members has an enormous impact on how we develop and implement projects, so please know your input is important to us. We read every email and letter sent to us.

Interested persons, state and local governments, and tribes are encouraged to participate now and throughout the development of this project. Comments attachments submitted electronically must be in plain text (.txt), rich text format (.rtf), or Word (.doc or .docx).

Hard copy comments may be:

- Mailed to the attention of Janine Book and/or Matthew Jedra, Acting District Rangers, c/o Kyla Sabo, Mt. Hough Ranger District, 39696 Highway 70, Quincy, CA 95971;

- Hand delivered weekdays (except holidays) between the hours of 8:00 a.m. and 4:30 p.m. to the Mt. Hough Ranger District, 39696 Highway 70, Quincy, CA 95971;
- Faxed to 530-283-1821.

If you have questions or need additional information about this proposal or the comment procedures, please contact Kyla Sabo, Project Leader, at kylasabo@fs.fed.us or 530-283-7619.

References

- USDA Forest Service. 1988. Plumas National Forest Land and Resource Management Plan. USDA Forest Service Plumas National Forest, Quincy, CA.
- USDA Forest Service. 2004a. Final Environmental Impact Statement for the Sierra Nevada Forest Plan Amendment. USDA Forest Service Pacific Southwest Region, Vallejo, CA
- USDA Forest Service. 2004b. Record of Decision Sierra Nevada Forest Plan Amendment. USDA Forest Service Pacific Southwest Region, Vallejo, CA
- USDA Forest Service 2014. Moonlight Fire: Meadow and Aspen Restoration Prioritization Survey Summary Report. Prepared by the U.S. Forest Service Sierra-Cascade Ecology Program. Document on file at the Plumas National Forest Supervisors Office.

Maps

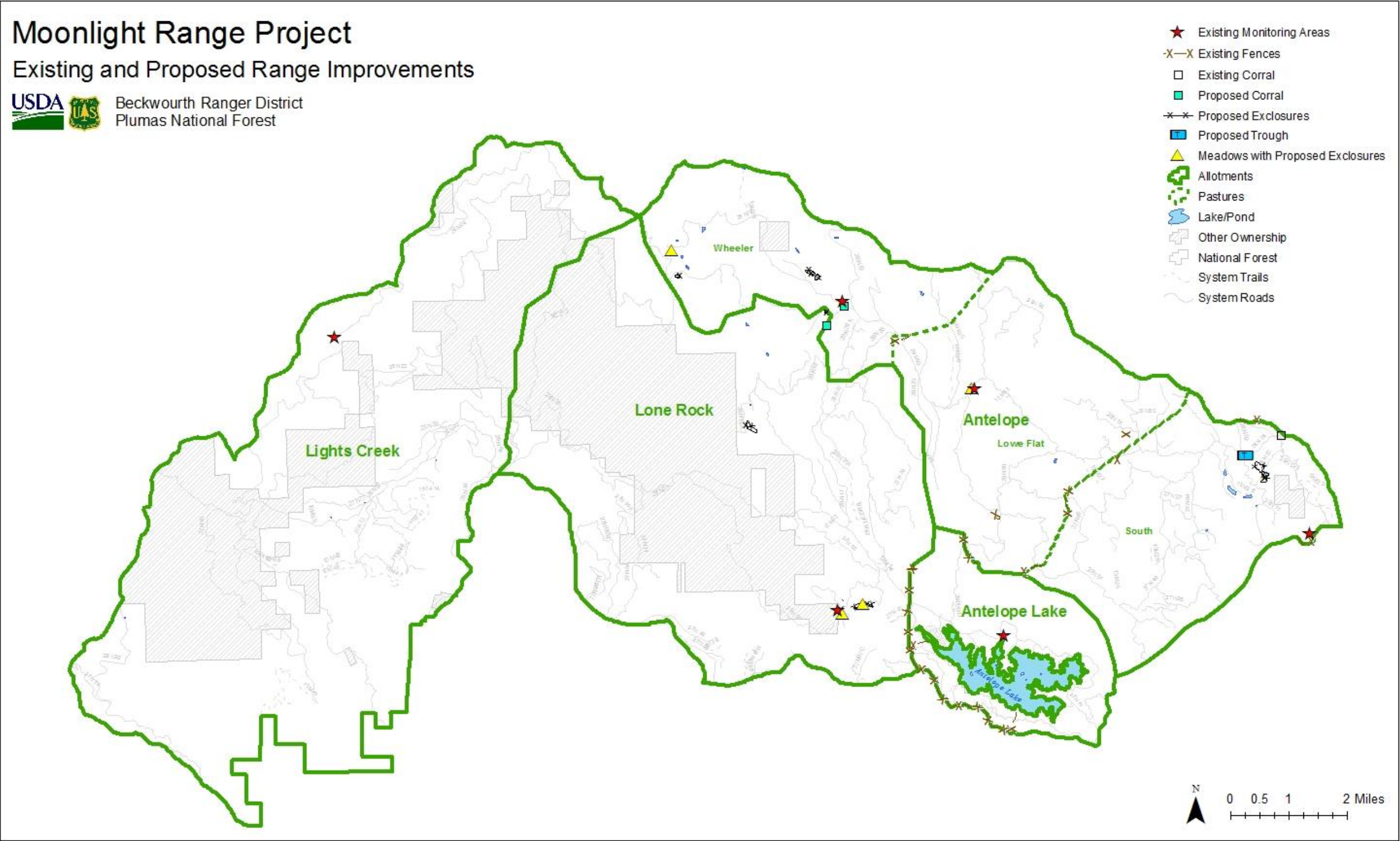


Figure 1. Moonlight Range Allotments Project existing and proposed range improvements including proposed new possible corral locations and new water trough.

Moonlight Range Project

Proposed Meadow Treatments



Beckwourth Ranger District
Plumas National Forest

- Proposed Meadow Treatments**
- Hand thin
 - Hand thin, meadow restoration
 - Meadow restoration
 - Mechanical thin
 - Mechanical thin, meadow restoration
 - Revegetation
 - Meadows with Proposed Exclosures
 - Proposed Aspen Exclosures
 - Allotments
 - Pastures
 - Lake/Pond
 - Other Ownership
 - National Forest
 - System Trails
 - System Roads

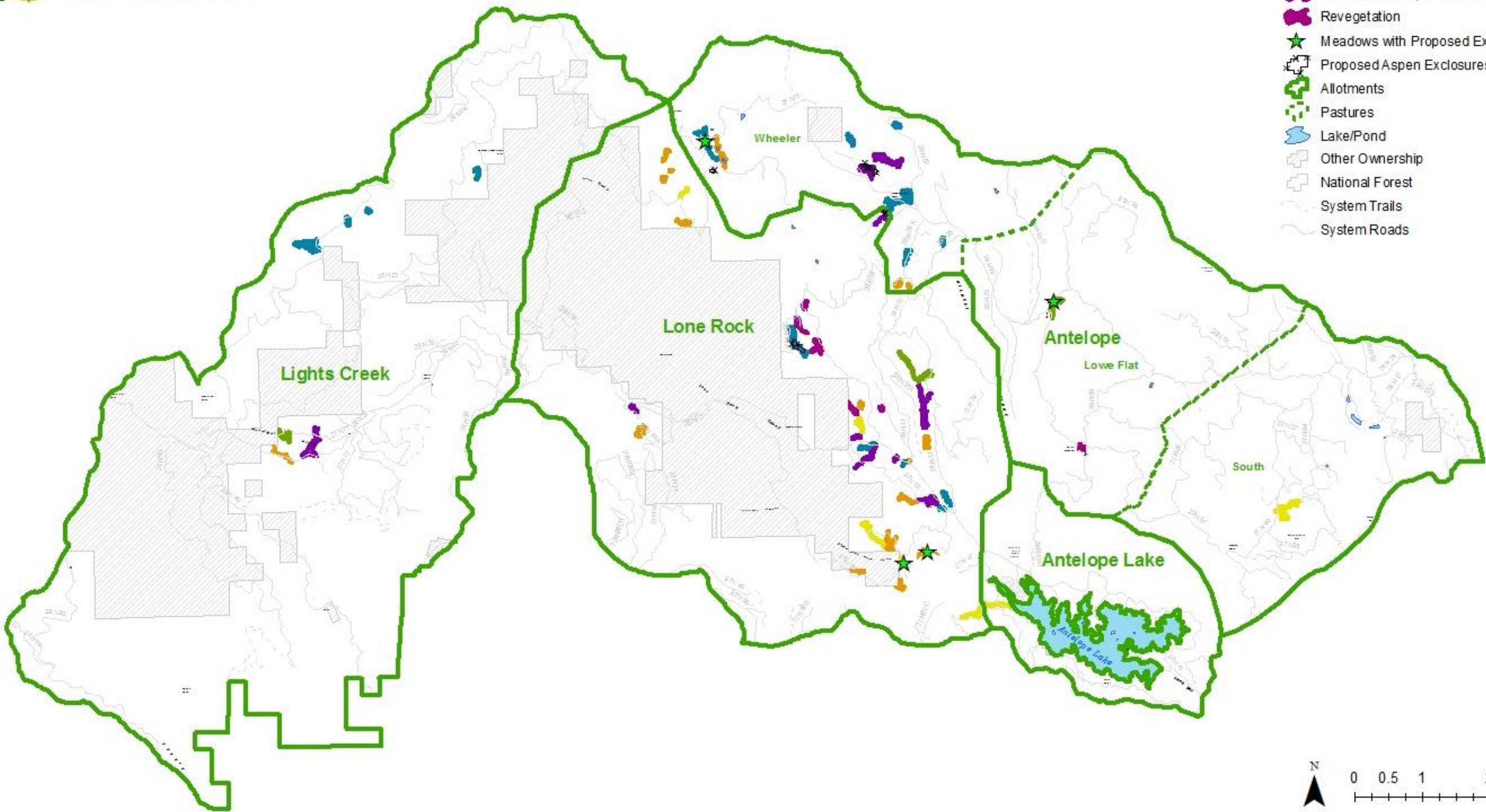


Figure 2. Moonlight Range Allotment Project proposed meadow treatments and proposed new exclosures.